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CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

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THIS IS UNEVALUATED INFORMATION

1. The quantity of DC machinery produced at the former Sousedik firm in Vsetin (N 49-20, E 18-00) was small. When MEZ Vsetin succeeded Sousedik in 1946, MEZ Vsetin discontinued the production of the Sousedik series. By the end of 1946, MEZ Vsetin had completed deliveries on all Sousedik orders which were already in progress. The most important of these deliveries was a small number of turbo-generators to be used as sources of current for lighting purposes on locomotives. The generators were delivered to the E. Smola firm in Pilsen. This was the former name of the firm; its present name is unknown [redacted] MEZ Zidenice in Brno-Zidenice as the factory which was officially responsible for the production of generators of this size.

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2. The MEZ production program originally called for DC machinery of small and medium sizes. During 1947 and 1948, the factory designed a new series of DC machines. The outer diameters of the armatures followed the Ra40 line of the CSN-ESC (Czechoslovak Standards - Czechoslovak Electrotechnical Union) and were of the following sizes: 70, 100, 130, 170, 220, and 280 mm. These machines were included in the catalog of the firm. Machines of larger sizes were also produced, but they were not included in the firm's catalog because the detailed specifications were not determined in advance, but rather upon receipt of a particular order. The sizes of these larger machines, as determined by the outer diameter of the armature, followed the Ra20 line of the CSN-ESC, i.e., the diameters were 315, 355, 400, 450, 500, 560, 630, 710, and 800 mm. A 900-mm. size was also designed but not yet produced as of September 1954. The 315-mm. type was produced in two lengths, the specific measurements of which [redacted] could not recall. No specific length was determined for the other types until 1952. At that time, one length was determined for each type, including the 315-mm. type, which, after 1952, was also produced in one length only. [redacted]

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3. The machines measuring from 130 mm. through 400 mm. had four poles, although the 400-mm. type was also manufactured with six poles. The machines from 450 mm. through 630 mm. had six poles, although the 630-mm. type was also produced with eight poles. The 710-mm. type had eight poles and the 800-mm. type had six or 10 poles. In addition to being produced with four main and four auxiliary poles, which is usually the case, the 220, 280, and 315 mm. types were also produced with four main poles and two auxiliary poles. However, this latter production was discontinued in 1952 because these machines were inclined to develop defects. To have prevented these defects would have called for a particularly high manufacturing standard, which standard MEZ Vsetin could not meet.
4. The DC machines were given specific designations, e.g., MS 45 32-4k. "M" designated the machine as a DC machine, both motor and generator. The second letter, "S" in this case, designated the particular design. Other second-letter designations were:
- "A" designated amplidyne.
  - "B" designated excitor for synchronous generators, the production of which was discontinued in 1951.<sup>1</sup>
  - "D" designated traction machines.
  - "E" designated explosion-proof machines.
  - "F" designated generators for charging batteries used in telephone switchboard apparatus.
  - "H" designated mining machinery.
  - "J" designated machines to be installed in cranes.
  - "L" designated Rototrol exciters, manufactured according to the Westinghouse model.
  - "N" designated low-voltage generators.
  - "P" designated enclosed machines with surface cooling systems.
  - "R" designated machinery complying with specifications listed in the Soviet Maritime or River Register. The machines installed in the first Soviet passenger ships of the first series were designated "M" only. As a result of a misunderstanding, machines manufactured later but still in the first series were designated "LM". Starting with the first machine of the second series, however, the machines were designated "MR".<sup>2</sup>
  - "S" designated dynamometers.
  - "U" designated entirely enclosed machines.
  - "V" designated machines with exciters of a special design.
  - "Z" designated any machine which differed from the usual design of that particular machine.

The first two-digit number stood for the outer diameter of the armature in centimeters, "45" in this case. The second two-digit number stood for the length of the armature in centimeters, including the radial ventilating channels, "32" in this case. The figure following the hyphen designated the number of poles. A small letter "k" was added to the end of the designation for machines with compensatory winding.

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5. During the years 1948 and 1949, the production of small DC machines, from 70 mm. through 170 mm., was transferred to MEZ Zidenice. From then on, MEZ Vsetin was the main plant in Czechoslovakia for production of DC machines of medium sizes. This was not true, however, of traction machines because all sizes of these machines were produced by CKD Stalingrad or the V.I. Lenin Works in Pilsen-Doudlevo. MEZ Vsetin retained production for one customer only, the Stavoloko firm in Radotin (N 49-59, E 14-22). Another exception was the production of amplidynes in the following sizes, as determined by the outer diameter of the armature: 80, 100, 120, 125, 160, and 250 mm. This production was transferred from MEZ Zidenice to MEZ Vsetin in 1953.
6. Prior to 1949, production of DC machines comprised a small portion of the total production of MEZ Vsetin. DC machines of small sizes, mainly the 220-mm. type, were produced. After 1949, production was switched from small DC machines to machines of larger sizes and even complete DC drives. Some of the latter were of very modern design with rotary amplifiers and later even magnetic amplifiers. The value of the yearly production of DC machines was gradually increased, and, in 1953, DC machines comprised a little less than 50% of the factory's yearly production.<sup>3</sup>
7. The first order for DC machinery destined for the USSR was placed during 1947. It included about 20 machines of various types. One machine was the M 50 32-6 type rated for an output of 85 kw. at from 500 to 1,000 rpm. A few machines were of the M 35 type. The remaining machines were of small sizes, some of them being destined for use in cranes. However, MEZ Vsetin did not produce special machines for cranes. Conventional-type machines bearing the MJ designation were delivered instead. Delivery of the first order was completed by the end of 1949.
8. The second order for DC machinery destined for the USSR was placed in 1948 and was for about 200 motor-generators. About 100 units were to be rated for an output of 100 kw, 270 v, at 1,470 rpm, and about 100 units for an output of 75 kw, 270 v, at 1,470 rpm.

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The DC generators rated for 100 kw output were the M 31 29-4 type. Those rated for 75 kw output were the M 31 21-4 type. This delivery was completed by the end of 1952.<sup>4</sup>

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